



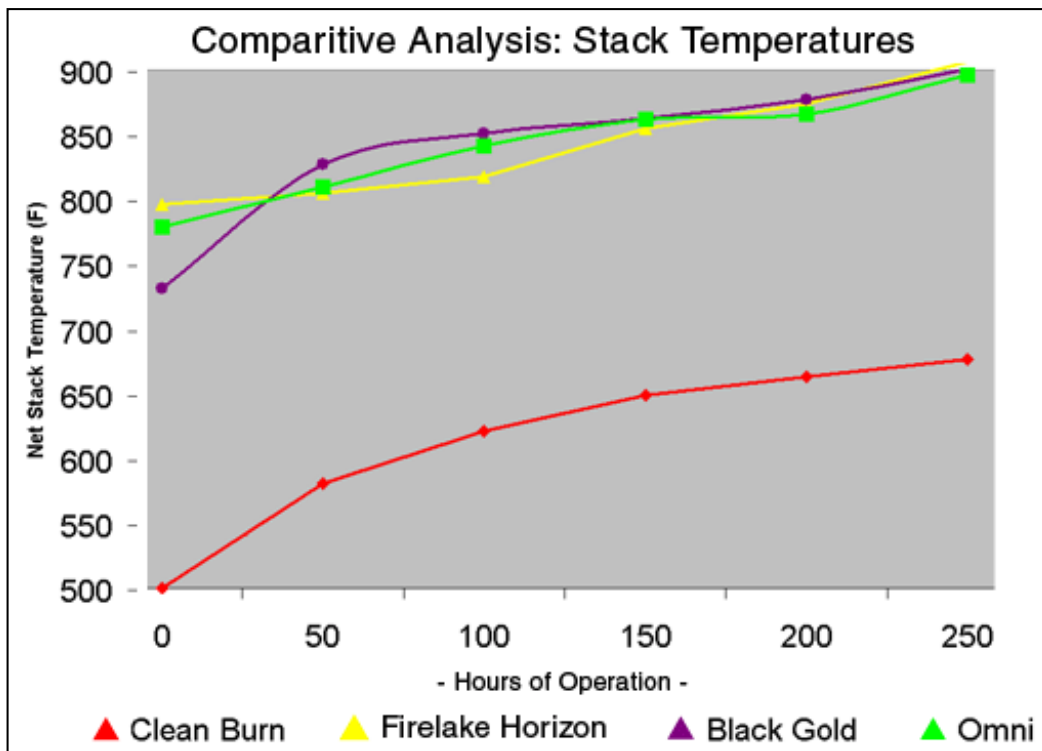
## Clean Burn Efficiencies

Measuring the efficiency of used oil furnaces is difficult because a clean furnace burns more efficiently than a dirty one. Ash residue from the combustion of used oil builds up inside the combustion chamber and gradually reduces the amount of heat transferred from the combustion chamber to the room air. This means that the precise efficiency level of any used oil furnace is constantly changing depending on the amount of ash build up, in addition to other factors.

**Typical Clean Burn Stack Temperature = 450°**

Typical Blast Tube Furnace Stack Temperature = 600° to 1000°

When making a comparison between equivalent competing furnaces over a proscribed number of hours, you will find a striking difference with a Clean Burn furnace – a considerably lower stack temperature. **The lower the stack temperature; the greater the furnace efficiency.**



A low stack temperature means less heat is being lost out the stack and more heat is radiated out to the room environment -- this all due to Clean Burns innovative, heavy construction, multi-pass heat exchanger.

**CLEAN BURN** Multi-pass heat exchanger

Heavy duty construction typically weighing 130 lbs more than its competitors - retains more heat - lasts longer -

Air is channeled over multi-pass heat exchanger tubes - extracting more BTU's per gallon of oil burned

Maximum heat is extracted from heat exchangers

650°F

Less Heat Up Chimney stack temperature 650F at 250 hours operations

Blast Chamber with stainless steel Energy Retention Plate - retains heat - protects furnace -

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**TYPICAL COMPETITOR** Single-pass blast tube

Light weight construction

Simple open blast tube - poor heat retention -

Heat is poorly extracted by blast tube

900°F

More Heat Up Chimney stack temperature 900F at 250 hours operations

No heat exchanger

The diagram illustrates two furnace models. The top model, labeled 'CLEAN BURN', is shown in a red cutaway view. It features a multi-pass heat exchanger with blue arrows indicating air flow over multiple tubes. A stainless steel energy retention plate is positioned above the burner. The bottom model, labeled 'TYPICAL COMPETITOR', is shown in a blue cutaway view. It features a simple open blast tube with orange arrows indicating air flow. The burner is located directly above the blast tube. The diagram uses color-coded arrows: blue for air flow, orange for heat flow, and red for heat loss. The CLEAN BURN model shows significantly less heat loss (red arrows) compared to the competitor model.

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